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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/937,467	09/25/2001	Thomas Elmer	Mo-6591/L4/A33,454	9554
157	1590	01/28/2004	EXAMINER	
BAYER POLYMERS LLC 100 BAYER ROAD PITTSBURGH, PA 15205			SORKIN, DAVID L	
			ART UNIT	PAPER NUMBER
			1725	

DATE MAILED: 01/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.	Applicant(s)
09/937,467	ELSNER ET AL.
Examiner	Art Unit
David L. Sorkin	1723

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
 Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory maximum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1a) ☒ Responsive to communication(s) filed on 09 January 2004.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 23-28 and 30-46 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 34-46 is/are allowed.
- 6) ☒ Claim(s) 23-28 and 30-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant must not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
 a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
 5) ☐ Notice of Informal Patent Application (PTO-152)
 6) ☐ Other:

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 09 January 2004 has been entered.

Drawings

2. Drawings were received on 09 January 2004. These drawings are approved by the examiner as to content; however, a draftsman may object to them at a latter date due to the presence of stray marks.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 23-28 and 30-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stade (US 4,534,652) in view of Higuchi et al. (US 4,474,473). Note: regarding the apparatus claims, language which relates to intended use, such as "intake" (vs. outlet) or "down-stream" (vs. upstream) has been given patentably weight to the extent that it implies structure; however, "recitation with respect to the manner in

which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" *Ex parte Masham*, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987). Also, "the manner or method in which such machine is to be utilized is not germane to the issue of patentability of the machine itself". *In re Casey* 152 USPQ 235 (CCPA 1967). Regarding claims 23 and 24, Stade ('652) discloses an apparatus comprising a double shaft extruder comprising two shafts (3,4 and 3',4') rotating in the same direction and meshing with one another; an intake opening (15 or 17 or 18); upstream and downstream portions relative to said intake opening, wherein the shaft of the extruder are designed with a double leads in a degassing zone (2 or a portion thereof) of the extruder, and with a triple lead in a pressure build-up zone (1 or a portion thereof) of the extruder, each of said degassing zone and said pressure build-up zone being down-stream from said intake opening, and said pressure build-up zone being further down-stream than said degassing zone. Stade ('652) fails to disclose a numerical value for the L/D ratio of the extruder. Higuchi et al. (US 4,474,473) teaches "40" as an appropriate value for an extruder (see col. 8, lines 67). It is considered that it would have been obvious to one of ordinary skill in the art to have made the L/D ratio of the extruder of Stade ('652) "40", as taught by Higuchi ('473) because the extruders of both references are twins screw, co-rotating, self cleaning extruders and Higuchi ('473) explains a rationale for selecting L/D ratio (see col. 7, lines 2-7). Regarding claims 25 and 26 Higuchi ('473) further teaches that each section of an extruder may be cooled to suit the particular material being processed (see col. 6, lines 58-62). Regarding claim 27, kneading elements are disposed immediately downstream from said intake opening,

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said kneading elements being located between feed elements of said shafts (see Fig. 1). Regarding claim 28, the extruder comprises a plurality of degassing zones located downstream from said intake opening each of said degassing zones having an exhausting device (18, 16) connected thereto. Regarding claim 30, an agent inlet (17) is located in a region between two of said degassing zones. Regarding claim 31, an agent entraining inlet (17) is disclosed. Anything can be arbitrarily divided in to any number of "zones". It is considered that no further structural limitation is required by the reference to three zones in claim 31. Regarding claim 32, a backward degassing vent opening (15 or 18) is located upstream from said intake opening. Regarding claim 33, said plurality of degassing zones comprises a last degassing zone located furthest downstream from said intake opening, said extruder located furthest downstream from said intake opening, said extruder further comprising an additive admixing charging device (17) located in said last degassing zone.

Allowable Subject Matter

5. Claims 34-46 are allowed.

Response to Arguments

6. Applicant's arguments have been fully considered but they are not persuasive.
7. While the examiner agrees with applicant that it is important to consider whether the prior art is capable of performing the functions recited in the claims, in the instant case the apparatus is capable of being used to perform the functions recited in the claims. Applicant argues that the pressure build-up zone (1 or a portion thereof) of Stade ('652) would not be capable of being used to build up pressure, even if the

direction of rotation of the screw was such that material was directed from left to right in Fig. 1 of Stade ('652). However, the decrease in diameter within zone (1) would cause pressure to build up. Therefore zone (1) or a portion thereof may properly be considered a pressure build-up zone. This is merely one example of how the zone of Stade ('652) would be capable of performing the function implied by the term "pressure build-up zone".

8. Applicant argues that Higuchi ('473) does not disclose all the limitations of the claimed apparatus; however, this reference is only relied upon to show the obviousness of the L/D ratio range recited in the claims. One of ordinary skill in the art would have looked to highly analogous references such as Higuchi ('473) to select an appropriate L/D ratio for the extruder of Stade ('652). The L/D ratio range being claimed is very typical in the art.

Conclusion

9. This is a RCE of applicant's earlier Application No. 09/937,467. All claims are drawn to the same invention claimed in the earlier application and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the earlier application. Accordingly, **THIS ACTION IS MADE FINAL** even though it is the first action following the RCE. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no, however, event will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David L. Sorkin whose telephone number is 571-272-1148. The examiner can normally be reached on 9:00 -5:30 Mon.-Fri..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda L. Walker can be reached on 571-272-1151. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.


David Sorkin


CHARLES E. CCOLEY
PRIMARY EXAMINER